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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/829,468

Filing Date: April 09, 2001

Appellant(s): SEXTRO ET AL.

**MAILED**

*MAR 07 2008*

**GROUP 2600**

Bradley Williams  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/5/08 appealing from the Office action  
mailed 9/5/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Appellants prior appeal brief on 1/19/07.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Art Unit: 2612

5,938,737	Smallcomb	08-1999
2004/0117831	Ellis	06-2004

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. **Claim(s) 1, 4-10, 12-13, 15-17, 24-25 is/are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ellis et al. (2004/0117831) in view of Smallcomb (5938737).**

As to claim 1, Ellis et al. discloses:

receiving a terrestrial broadcast signal comprising a video stream ([0096]);

interpreting commands embedded in the video stream, said embedded commands operable to access interactive features, said embedded commands synchronized and correlated with additional Internet-based content ([0091]; [0183])

providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream (met as claimed above in claim 1 with respect to Ellis et al.; [0098]).

displaying said additional Internet-based content superimposed on said video stream from said terrestrial broadcast signal (television 30, figure 1A; [0186]; [0166]).

Art Unit: 2612

Ellis does not expressly teach, receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission.

Smallcomb discloses receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission (satellite downstream telephone line upstream for internet data; col. 3, lines 41-67).

It would have been obvious to one of ordinary skill in the art to modify Ellis to teach receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission, so as to reduce user upstream costs, while enjoying the benefits of broadband connections.

As to claim 4, Ellis et al. discloses:

said embedding comprising embedding delimiters to define sequential video clips for storage and future display stream ([0132]; [0138]; [0237]).

As to claim 5, Ellis et al. discloses:

said embedding comprising embedding delimiters to define sequential video clips for storage and future display, each of said sequential video clips comprising a segment of a sporting event ([0184]; [0138-0139]; [0044]; [0175-0176]).

As to claim 6, Ellis et al. discloses:

receiving a terrestrial broadcast signal comprising a video stream ([0096]); interpreting commands embedded in the video stream, said embedded commands operable to access interactive features, said embedded commands synchronized and correlated with additional Internet-based content ([0091]; [0183]); said embedding comprising embedding delimiters to define sequential video clips for storage and future display, each of said sequential video clips comprising a segment of a sporting event ([0091]; [0111]; [0114]; [0119-120]; [0164-200]); storing one or more of said video clips of said selected plays; summarizing said stored video clips with a graphic summary including coded indicators denoting types of plays; replaying one of said video clips upon viewer selection of a corresponding said coded indicator (see claim 5; [0018]; [0169]; [0184]). displaying said additional Internet-based content superimposed on said video stream from said terrestrial broadcast signal (television 30, figure 1A; [0186]; [0166]).

Ellis does not expressly teach, receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission.

Smallcomb discloses receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission (satellite downstream telephone line upstream for internet data; col. 3, lines 41-67).

It would have been obvious to one of ordinary skill in the art to modify Ellis to teach receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission, so as to reduce user upstream costs, while enjoying the benefits of broadband connections.

As to claim 7 Ellis et al. discloses:

comprising selecting a fixed graphic format for viewing on a standard non-interactive television (program guide as shown in figure 31).

As to claim 8 Ellis et al. discloses:

said embedding comprising embedding commands in said video stream to facilitate polling of viewers, allowing said viewers to vote on an aspect of said simultaneously displayed broadcast data (“The user may view a controllable sports ticker, as shown for example in FIG. 35, by selecting option 354. The user may participate in sports wagering and voting as well, as shown for example in FIGS. 36-38, by selecting option 355. The user may participate in fantasy sports leagues, as shown for example in FIGS. 39-40, by selecting option 356” [0166]).

As to claim 9, see claim 10.

As to claims 10 Ellis et al. discloses:

said embedding comprising embedding commands in said video stream to prompt access to Internet sites offering pushed products selected from the group consisting of: tickets to future sporting events, travel packages, and sports apparel ([0166]; [0185]).

As to claim 12 Ellis et al. discloses:

said embedding comprising embedding commands enabling a viewer to interactively complete a transaction to purchase various products by selecting an Internet generated icon on the display screen ("a user could click on Tim Allen's Binford saw during an episode of "Tool Time" to find out more information about it such as where to purchase it" [0046]; "guide may provide web sites or merchandise in a shopping application that match the user's preferences" [0203]).

As to claim 13 Ellis et al. discloses:

said embedding comprising embedding commands enabling a viewer to interactively complete a transaction to purchase various products and receive confirmation of said transaction in real-time on a display screen (see claim 12 and also "Screen 400 may also provide other options such as the option to buy tickets for local sports events by selecting option 403. When the user selects option 403, the program guide may provide a schedule of sporting events. The user may select a sporting event to purchase a ticket

for that event. Sporting schedules may be obtained from a real-time data source, server, or other database" [0185]).

As to claim 15 Ellis et al. discloses:

said embedding comprising embedding commands utilizing streaming data comprising a selected personalized portfolio of stocks, the ticker for said selected portfolio being taken from market data embedded in said video stream and presented and updated in a banner or window on said display screen ([0091]; [0235-0237]; [0242]; [102]).

As to claim 16 Ellis et al. discloses:

comprising editing interactive data selected from a group consisting of sports teams and portfolio stocks from a screen menu in real-time (see claim 15; [0057]; [0202]; [0111]).

As to claim 17,

Ellis et al. discloses:

receiving a terrestrial broadcast signal comprising a video stream ([0096]); interpreting commands embedded in the video stream, said embedded commands operable to access interactive features, said embedded commands synchronized and correlated with additional Internet-based content ([0091]; [0183])

displaying said additional Internet-based content superimposed on said video stream from said terrestrial broadcast signal (television 30, figure 1A; [0186]; [0166]).

providing taskbars displaying various accounts in the home (see claim 11; [0202]).

Ellis does not expressly teach, receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission.

Smallcomb discloses receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission (satellite downstream telephone line upstream for internet data; col. 3, lines 41-67).

It would have been obvious to one of ordinary skill in the art to modify Ellis to teach receiving said Internet-based content via satellite transmission, and sending transmitting information via landline transmission, so as to reduce user upstream costs, while enjoying the benefits of broadband connections, and provide additional means for data.

As to claim 24, Ellis discloses:

Storing one or more of said video clips of said selected plays; Replaying one of said video clips upon viewer selection.

Ellis does not expressly teach summarizing said stored video clips with a graphic summary including coded indicators denoting types of plays. It would have been obvious to one of ordinary skill in the art to modify Ellis to teach summarizing said

stored video clips with a graphic summary including coded indicators denoting types of plays, as an obvious matter of design choice, and to enable quicker means for identifying desired data.

As to claim 25, Ellis discloses:

providing taskbars displaying various accounts in the home (see claim 11; [0202]).

**2. Claim(s) 2, 14 is/are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ellis (20040117831), in view of Smallcomb (5938737), and in view of Butler et al. (2002/0007493).**

As to claim 2,

Ellis does not expressly teach said embedding comprising embedding HTML commands.

Butler discloses embedding HTML commands ([0009]; [0020]; [0051]; [0060]).

It would have been obvious to one of ordinary skill in the art to modify Ellis to teach said embedding comprising embedding HTML commands, so as to allow video broadcasters to prepare ancillary data content as HTML files.

As to claim 14 Butler et al. discloses:

Ellis does not expressly teach said embedding comprising embedding commands utilizing streaming data from said Internet or television broadcast to further enhance the

viewing experience by continuously superimposing interactive data in various locations on said broadcast video

Butler discloses said embedding comprising embedding commands utilizing streaming data from said Internet or television broadcast to further enhance the viewing experience by continuously superimposing interactive data in various locations on said broadcast video ([0015]; [0044]; [0048]).

It would have been obvious to one of ordinary skill in the art to modify Ellis to teach said embedding comprising embedding commands utilizing streaming data from said Internet or television broadcast to further enhance the viewing experience by continuously superimposing interactive data in various locations on said broadcast video, so as to allow greater usability and interaction with the users, and provide an additional means of receiving data.

**3. Claim(s) 18 is/are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butler et al. (2002/0007493), in view of Smallcomb (5938737), and in view of Ellis (20040117831).**

As to claim 18,

Butler et al. discloses:

a broadcast video receiver for receiving video data from a video provider service via terrestrial broadcast transmission (terrestrial broadcast source [0013]);  
an internet browser providing bidirectional access to internet content ([0041])

a graphics processor capable of receiving said broadcast video content and said internet content and providing combined video data comprised of both broadcast video content and internet content (met as discussed above and by processor 52, figure 2; "FIG. 2 shows an example implementation of PC 14 in more detail. PC 14 is enhanced for purposes of displaying broadcast television and accompanying digital data content" [0031]).

a display in communication with said graphics processor for displaying said combined video (monitor 68, figure 2; [0034]).

a viewer interface interpreting viewer input and sending corresponding data content through said internet browser to a third party [0029]; [0042]; [0022]).

Butler does not expressly teach said internet browser receiving said internet content via satellite transmission, and said internet browser sending said internet content via landline transmission.

Smallcomb discloses said internet browser receiving said internet content via satellite transmission, and said internet browser sending said internet content via landline transmission (satellite downstream telephone line upstream for internet data; col. 3, lines 41-67).

It would have been obvious to one of ordinary skill in the art to modify Butler to teach said internet browser receiving said internet content via satellite transmission, and said internet browser sending said internet content via landline transmission, so as to reduce user upstream costs, while enjoying the benefits of broadband connections.

The combination above does not expressly teach providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream.

Ellis et al. discloses:

providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream (met as claimed above in claim 1 with respect to Ellis et al.; [0098]).

It would have been obvious to one of ordinary skill in the art to modify the combination above to teach providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream, so as to provide an additional means of receiving data.

**4. Claim(s) 11 is/are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butler (20020007493) in view of Ellis et al. (2004/0117831).**

As to claim 11,

Butler discloses:

providing a broadcast signal comprising a video stream ([0013]);

embedding commands in the video stream, said embedded commands operable to access interactive features, said embedded commands synchronized and correlated with additional Internet-based content ([0015]; [0051]).

displaying said additional Internet-based content superimposed on said video stream from said traditional broadcast signal ([0044]; [0051]).

Butler does not expressly teach said embedding comprising embedding commands in said video stream to prompt access to Internet sites offering pushed products selected using analysis of said viewer's habits; a 'set-top...'

Ellis discloses said embedding comprising embedding commands in said video stream to prompt access to Internet sites based on a viewer ([0166-0167]; [0185]; [0140]; [0203]; [0131]; [0245]; [0250]; [0008]; [0010]).

Ellis et al. discloses:

providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream (met as claimed above in claim 1 with respect to Ellis et al.; [0098]).

It would have been obvious to one of ordinary skill in the art to modify Butler to teach said embedding comprising embedding commands in said video stream to prompt access to Internet sites offering pushed products selected using analysis of said viewer's habits; 'set-top...', so as to provide customizable features of interest to particular users.

#### **(10) Response to Argument**

a. Appellant argues on page 11, that Appellants' provisional application 60195411 (pasted below), filed 4/8/2000, *fully supports* the present claims.

Examiner respectfully disagrees. For instance, appellant does not disclose "providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream" in appellants' provisional dated 4/8/2000.

Furthermore, the Ellis provisional was indeed faxed to appellant.

b. Appellant argues on page 12, that the prior art does not teach claim 1, even though the Examiner showed that Ellis 2004/0117831 discloses a set-top box in paragraph [0098].

Examiner respectfully disagrees. Furthermore, for the same reasons as stated in response to argument a), appellant does not disclose "providing a digital interactive set-top box coupled to a standard television, said interactive set-top box accessing said additional Internet-based content and superimposing said content on said video stream" in appellants' provisional dated 4/8/2000.

Furthermore, the Ellis provisional incorporates in its entirety, application 09/229047, which discloses a set-top box on page 3.

c. Appellant argues on page 14, that the Ellis provisional does not disclose "one or more of said video clips of selected plays" and "summarizing said stored video clips with a graphic summary including indicators denoting types of plays."

The Ellis provisional 60141501 page 7 et al discloses: a “sports fan hub,” VOD of recorded sporting events. The sports browser is disclosed in further detail in application 09/229047, which is incorporated in its entirety by the Ellis provisional.

d. Appellant argues on page 15, that the Ellis provisional does not disclose “providing taskbars displaying various accounts in the home.”

Ellis provisional 60141501 page 9 et al discloses: “personal profiles for various members.”

Ellis provisional 60141501 page 13 et al discloses: “individual users within the household may define their own hubs....”

e. Appellant argues on page 15, that the arguments presented in Examiner’s office action before reopening the case are not identical to the arguments after reopening the case.

It should be noted that this case was reopened in view of new grounds of rejection, which is relied upon here.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Shirley Lu

Conferees:

George Bugg

Jeff Hofsass

/ Acting SPE AU 2612 *George Bugg*

Shirley Lu  
*Shirley Lu*

*JH*  
JEFFERY HOFSSASS  
SUPERVISORY PATENT EXAMINER  
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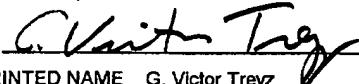
**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

60/141501  
6/28/99  
PTO

INVENTOR(S)					
Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign County)			
Michael D. Edward B.	Ellis Knudson	Boulder, Colorado Littleton, Colorado			
Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
ELECTRONIC PROGRAM GUIDE WITH NICHE HUBS					
CORRESPONDENCE ADDRESS					
Direct all correspondence to:		Place Customer Number Bar Code Label here			
<input type="checkbox"/> Customer Number OR  <input type="text"/>	Type Customer Number here				
<input checked="" type="checkbox"/> Firm or Individual Name	G. Victor Treyz c/o Fish & Neave				
Address					
Address	1251 Avenue of the Americas				
City	New York	State	New York	ZIP	10020-1104
Country	U.S.A.	Telephone	212-596-9000	Fax	212-596-9090
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages	14	<input type="checkbox"/> Small Entity Statement			
<input type="checkbox"/> Drawings Number of Pages	<input type="text"/>	<input type="checkbox"/> Other (specify)	<input type="text"/>		
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
<input type="checkbox"/> A check or money order is enclosed to cover the filing fees			FILING FEE AMOUNT (\$)		
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The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government No. Yes, the name of the U.S. Government agency and the Government contract number are: _____					

Respectfully submitted,

SIGNATURE   
 TYPED or PRINTED NAME G. Victor Treyz  
 TELEPHONE (212) 596-9011

Date

6/28/99

REGISTRATION NO.

36,294

(If appropriate)

UV-152 Prov.

Docket Number:

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This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C., 20231.

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ELECTRONIC PROGRAM GUIDE WITH NICHE HUBS

Many program guides allow a user to view television programs in a specified category. Some program guides allow users to define profiles of likes and dislikes, and view program listings that meet the 5 desired category combinations. However, there is no product which collects together all of the features related to a specific category.

In this invention, an interactive program guide provides a number of "niche hubs." Each of these 10 hubs is an area of the guide in which features, programming, and information may be found related to a particular user interest. A viewer might enter one of these hubs, interact with its various features, and then return to normal television and the general- 15 purpose guide. Unlike user-preference-based guides, there is no mode. When one viewer in a household is done making selections, the guide is not left in a state with that viewer's preferences still intact. There is no need to "log in" and tell the system who is 20 watching television.

There may be a menu of hubs available. A particular cable operator or user may be allowed to select among them, to choose which are presented to the user. Each of the hubs may be sold to the user as a 25 separate product/extension to the program guide. A

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user may otherwise be able to activate or deactivate individual hubs.

There are a number of types of features in common between the hubs. Preferably, the individual 5 hubs are designed to take advantage of this common code, with a large portion of each being data driven. This also makes it easier and quicker to design and develop new hubs.

Features in a hub may be linked, similar to 10 the concept of hyperlinks. It may use the concept of a combined description/action information screen, as described in U.S. patent application Serial No. 60/108,270, filed November 12, 1998, which is hereby incorporated by reference herein in its entirety. It 15 may also provide a portal to other applications that are related, as described in U.S. patent application Serial No. 60/093,865, filed July 23, 1998, which is hereby incorporated by reference herein in its entirety.

20 Some of the features that might be found in any hub include:

- Listings of programs that match the category of interest. This may include various formats, such as basic or premium television, pay-per-view (PPV), near-video-on-demand (NVOD), video-on-demand (VOD), etc. It 25 also includes the ability to order any pay programming.

- Detailed program information, including video clips, graphics, reviews, trivia, star information, biographies, etc.

30 · Ability to find programs of peripheral interest. This might include listings of talk shows with a guest related to the topic of interest, or other guest appearances.

• Various ways to sort data. This may include sorting by time, channel, title, sub-genre, rating, etc.

• Advance notification of programs that may not be scheduled yet, but that may be coming soon (e.g., VOD, PPV, and premium), as described in U.S. patent application Serial No. 60/097,504, filed August 21, 1998, which is hereby incorporated by reference herein in its entirety.

5 10 • Ability to view lists and descriptions of packages of related programs and channels, as well as the ability to order packages, as described in U.S. patent application Serial No. 08/944,153, filed October 6, 1997, which is hereby incorporated by reference herein in its entirety.

15 • TV Mail, as described in U.S. patent application Serial No. 60/099,301, filed August 26, 1998, which is hereby incorporated by reference herein in its entirety. This may include mail to cast members, fan clubs, and other fans, the ability to send PPV authorizations, the ability to record a program or part of a program for another person, the ability to send merchandise, the ability to set reminders for others, etc.

20 25 • TV Chat, as described in the above-mentioned U.S. patent application Serial No. 60/099,301. This may include scheduled chats, with reminders. It may also include listings of related general chat rooms.

• The ability to read messages from related news groups, as well as the ability to post messages to these groups. This would include listings of related news groups.

30

- The ability to access related web sites. Information from these web sites may also be embedded directly within the guide hub.
- Shopping for related merchandise. This may 5 be done directly or via links to a shopping application.
- Schedule of related local events (movies, sports, concerts, civic events, etc.)
- Related trivia, contests, surveys, voting, 10 games, etc.
- Reminders (including series reminders, as described in U.S. patent application Serial No. 09/330,792, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety.
- 15 Reminders may also be set up via Internet, and may also be sent via email or pager, as described in U.S. patent application Serial No. 60/097,527, filed August 21, 1998, which is hereby incorporated by reference herein in its entirety.
- 20 • Server-based recording as described in U.S. patent application Serial No. 09/332,244, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety. This includes series recording as described in the above-mentioned patent application
- 25 Serial No. 09/330,792. This also includes VOD access to recorded programs. It may be set up via the Internet. It also includes real-time VCR-like functions.
- Searching of an extensive database on the 30 server of related programs. The database may include text, graphics, video clips, audio clips, etc., and may have links to listings, VOD, and purchasing. The database may include programs that are not available to the viewer, with the ability to set a reminder to be

notified when it becomes available. The database may include an extensive video clip library.

• Improved user help features. This may include context-sensitive video-on-demand-based help, 5 and pop-up hints as described in U.S. Patent 5,822,123, which is hereby incorporated by reference herein in its entirety.

• Ability to specify favorite actors, sub- genres, etc. See also U.S. patent application Serial 10 No. 09/034,934, filed March 4, 1998, which is hereby incorporated by reference herein.

• Automated suggestions of programming that may be of interest. This may be based on user selections, similarity to other programs the viewer has watched, or 15 other factors. It may include reminders based on the suggestions. See U.S. patent application Serial No. 09/330,793, filed June 11, 1999 and U.S. patent application Serial No. 60/110,989, filed December 3, 1998, which are hereby incorporated by reference herein 20 in their entireties.

• Targeted ads. These ads may be shown in specific hubs, or in specific features. They may also be targeted based on user actions. See U.S. patent application Serial No. 09/034,939, filed March 4, 1998, 25 which is hereby incorporated by reference herein in its entirety.

• Live data. This may include tickers, which may or may not be customizable, and may or may not be user controllable. See U.S. Patent 5,589,892, which is 30 hereby incorporated by reference herein in its entirety and U.S. patent application Serial No. 09/229,047, which is hereby incorporated by reference herein in its entirety.

- News and other live information. This may include localized content.
- Magazine type features. This could be general information and entertainment content related to the hub category. It may include text, graphics and video.
- Links to other related applications. These links may be specific to a program, or may be general links for the hub category. See above-mentioned U.S. patent application Serial No. 60/093,865, filed July 23, 1998.
- Direct links to related guide setup features. This may include the ability to set up parental control options, audio settings, favorite channels, etc.
- 15 • Parental control within the hub. This may include the ability to block specific features, etc.
- Ability to display in-band data. This includes the ability to display any information sent by the programmer with the program, such as song title/track/artist.
- 20 • Each hub may have its own unique graphic style, icons, backgrounds, etc. Broadcast or on-demand video or audio may be incorporated into the user interface while in the hub.

25

Some examples of hubs follow, with some of the features that may be available within the hub. These lists are meant to be exemplary, not all-inclusive.

30

Movie Buff Hub

- Listings of movies available on all channels
- VOD movies
- PPV/NVOD listings and ordering



- Individual areas within the hub for each sport category
- Ability to set favorite sports, leagues, teams, etc.
- 5 • Highlighting of any program which may have sports content (e.g., Dennis Rodman on Dave Letterman)
- Automatic reminders based on sports preferences
- Sports-related advertising
- 10 • Sports-related merchandising
- Support for a sports browser (as described in the above-mentioned U.S. patent application Serial No. 09/229,047)
- Trivia
- 15 • Fantasy sports leagues
- All-star voting, etc.
- Scheduled chats and news groups related to sports
- Links to sports-related web sites
- 20 • High school sports, and other items of local interest
- Wagering (TV Games Network support)

Family Hub

- 25 • Listings of children's programs on all channels
- Listings of family-oriented programming
- VOD targeted to families and kids
- Parental control setup with explanations and
- 30 extended support for ratings and related information
- Family targeted ads
- Family targeted merchandise
- Reviews and recommendations

- Ability to create personal profiles (with different levels of rating restriction) for various family members
- Family-oriented features (news, interviews, etc.), with text, graphics, and/or video
- Scheduled/moderated chats for kids, moderated news groups
- Pen pal email clubs
- Links to kid-friendly web sites

10 • Support for a "parents' television (TV)" and a "kids' TV," where the parents can control operation of the kids' TV remotely (see U.S. patent application Serial No. 60/093,292, filed July 17, 1998, which is hereby incorporated by reference herein in its entirety.)

Music Lovers Hub

- Listings of digital music channels
- Listings of music video channels

20 • PPV concert listings and ordering

- Concerts on all channels
- Highlighting of programs with musical guests (this week's musical guest on Saturday Night Live, tonight on Jay, etc.)

25 • Digital music with title/track/artist

- Ability to display graphics, such as album covers, stills from music video, etc.
- Graphics may be shrunk on full-screen menus
- Karaoke mode

30 • Music on demand

- Music videos on demand
- Interactive request-based music and music videos

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- Ability to listen to one music channel while displaying title, track, and artist (TTA) information for another, as described in U.S. patent application Serial No. 09/330,860, filed June 11, 1999, which is
- 5 hereby incorporated by reference herein in its entirety.
- Ability to listen to one channel and display a listings screen with song titles on all other music channels (see above-mentioned U.S. patent application
- 10 Serial No. 09/330,860.)
- Ability to buy CDs, either of music currently playing, or from library
  - Concert schedules
  - Ability to buy concert tickets
- 15 · Other music-related merchandise
- Favorites (e.g., by artist)
- Voting for favorite songs
- Biographies, discographies, compact disc (CD) or concert reviews, etc.
- 20 · Ads targeted to music
- Support for parental control (to allow parents to prevent children from listening to objectionable songs or objectionable types of music, etc.)
- 25 · Scheduled chats, news groups, fan clubs
- Links to web sites
- Support for AC-3, Dolby, etc., setup
- Ability to pick a music category to be used in the background in other parts of the guide
- 30 · Ability to record music, for example on the server, and listen to it later

Soap Opera Fanatic Hub

- Listings of soaps

- Summaries of recent episodes
- Biographies, interviews, behind the scenes, etc. (text, video, images, etc.)
- Targeted ads

5       • Scheduled chats, news groups, fan clubs

- Links to web sites
- Merchandise
- VOD of missed episodes
- Trivia

10

Sci-Fi Hub

- Listings of sci-fi programs and movies
- Summaries of recent episodes
- Biographies, interviews, behind the scenes, etc. (text, video, images, etc.)
- Searchable database of Star Trek episodes, etc.
- Star Trek convention schedules
- Targeted ads

20       • Scheduled chats, news groups, fan clubs

- Links to web sites
- Merchandise
- VOD
- Trivia

25

News/Info Hub

- Listings of news and news magazine programs
- Live news updates (text, graphics, VOD)
- Both local and national news

30       • Searchable database of background information

- Local weather, and searchable national/international weather
- Traffic, ski conditions, etc.
- Personalized stock updates



Cultural Hub

- Complete listings for public broadcasting stations
- Nature shows
- 5 • Art, history, philosophy, etc.
- Shows with high critic appeal and low ratings
- News groups, chats, web sites
- Feedback to network executives
- Distance learning support (VOD college
- 10 classes, etc.)

TV Addict Hub

- Highly searchable listings
- Targeted ads
- 15 • What's hot - e.g., recommendations of what to watch tonight, with emphasis on popular shows
- Server-based recording and VOD
- PPV and packaging
- Reviews, interviews, etc. (text, graphics,
- 20 video)
- Shopping
- Trivia
- Favorites and personal preferences
- Suggested programs, given the viewer's likes
- 25 and dislikes
- Chats, news groups, web sites related to popular shows

The guide may also allow the user to create  
30 one or more personalized hubs. Individual users within the household may define their own hubs, or they may be based on various moods, groups of viewers, etc. This hub is something of a program guide "home page." It may include, for example, the following:

- The home page may include links to any other features, or information from other parts of the guide. These may be features from any of the other hubs, or from any other part of the guide.
- 5     • Favorite programs, genres, actors, etc. The favorites are set up within the personal hub, and may affect the other features within that hub.
  - Recommended programs, based on the likes, dislikes, and viewing habits of the specific viewer
- 10    • Personal email accounts
  - Personal chat accounts
  - Targeted advertising, based on the likes, dislikes, and viewing habits of the specific viewer